

**PORTABLE AIR FILTRATION SYSTEM
UTILIZING A CONDUCTIVE COATING AND
A FILTER FOR USE THEREIN**

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ABSTRACT OF THE DISCLOSURE

10 A portable air filtration system includes a filter housing having an air inlet and outlet. The housing defines a filtration chamber between the inlet and outlet. The air filtration system uses an intake fan, an ionizing mechanism, a filter media, and a conductive coating to filter air. The fan moves the air through the chamber. The ionizing mechanism ionizes particles within the air to a negative charge. The media includes an upstream side facing the inlet and a downstream side facing the outlet and is disposed between the ionizing mechanism and the outlet to entrap the particles. The
15 conductive coating is applied to the upstream side of the media. This establishes an electric field between the ionizing mechanism and the conductive coating. Furthermore, the upstream side of the media is electrically-connected to ground through the conductive coating for dissipating the negative charge of the particles entrapped within the media.

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